ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

PROJECT INFORMATION

Project Title: 2Y Ranch Solar Project | **Project No. 09-609**

Region/GMU: Region VI / GMU 21 | **HPC:**

Project Type: Water Development / year round water for wildlife with improved drinker styles/locations

Project Description:
The 2Y Ranch Solar Project would seek to improve free water availability on Malapai Mesa in GMU 21. The project proposes to add four additional drinkers, along with an additional 10,000 gallon storage tank to the system. All existing drinkers, along with any new ones would be recessed into the ground to better allow for pronghorn and other wildlife.

Last year, this project received partial funding from HPC. The Department also found other funding sources to partner with the HPC funds, and was able to fund the installation of a solar pump at the well. Installation is currently taking place. This will ensure there is water available in the system year round.

Wildlife Species to Benefit: Pronghorn 70%, Mule Deer 30%, also Smallgame and Nongame species.

Possible Funding Partners: Landowner, AZGFD LRP program, Bureau of Land Management

Implementation Schedule:	**NEPA Compliance: (if applicable)**
Beginning: Spring 2010	**Completed: Yes ____ No __X__**
Completed: Spring 2011	**Projected Completion Date: Fall 2010**

PROJECT FUNDING

SBG Funds Requested: $ 19,840.00

Cost Share Funds: $ 122,700.00

Total Project Costs: $ 142,540.00

PARTICIPANT INFORMATION

Applicants:	
Jake Fousek WM, GMU 21 **Telephone: 928-567-2318** **Arizona Game and Fish Department Region VI** **7200 E. University** **Mesa, AZ 85207-6502**	**Tomas Teskey** **Telephone: 928 713 4703** **2Y Ranch** **HC 63 Box 3052** **Mayer, AZ 85333**

AGFD Contact and Phone No.
(If applicant is not AGFD personnel)

Coordinated with: AGFD, BLM, 2Y Ranch, AAF, APS	**Date:**
Applicant's signature: Jakob D. Fousek	**Date: 08/26/09**

SEND COMPLETED APPLICATIONS TO:

Game Branch
5000 W Carefree Highway.
Phoenix, AZ 85086
rthompson@azgfd.gov

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES _____ NO __X____
The project was presented at the Statewide HPC meeting.

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

Project submitted in 2008 and received partial funding ($25,000).

NEED STATEMENT/PROBLEM ANALYSIS:
The Malapai Mesa area on the 2Y Ranch in GMU 21 provides excellent habitat for pronghorn, but lacks dependable year round water. Some of the five drinkers on the mesa are kept full by the permittee only during periods when cattle are present, about four months of the year. During the other eight months, pronghorn are forced to use less desirable water sources in brushy canyons, which greatly increases their risk of being taken by predators. Pronghorn are regularly seen in the area, and a group of 12 pronghorn were seen during a site visit on 07/22/08. The GMU 21 Pronghorn study identified important fawning activity taking place on the mesa during the study period from 2002-2005.

Photograph 1. Pronghorn observed near a proposed new drinker location during site visit on 07/22/08.

Photograph 2. Pronghorn fawn in an area adjacent to the project area on 2Y Ranch.

To change the current situation, the 2Y Ranch Solar Project would seek to modify the current system used to get water on top of the mesa. With HPC/AGFD funding, a solar pumping system is currently being installed in the existing well to make the water source more reliable. Without having to travel to the well location on a daily basis to fill a generator with gasoline, the permittee will be able to keep water in the system year round.

Adding four additional drinkers to the existing five will give pronghorn better locations to water in open areas on the top of the mesa instead of in canyons. The project proposes to add four additional drinkers to the system. The locations were selected by AGFD and 2Y Ranch personnel to benefit pronghorn and continue responsible grazing practices.

Modifying the way the drinkers are plumbed and set will make them less prone to failure as well as easier to use for wildlife. The permittee has expressed a great interest in making the new drinkers more wildlife friendly, as well as modifying the existing five. Recessing the drinkers into the ground would have several benefits to wildlife. The recessed drinkers would be more durable, with less of a chance of failure due to being moved by livestock or erosion. A lower tank level would also allow smaller wildlife easier access to water. By recessing the drinkers, there would also be no need for crossbars on the tops of the tanks for structural support, which would benefit wildlife such as bats that fly across the surface of the water to drink. All existing and proposed new drinkers would also be fitted with a wildlife escape ramp to aid small species which become stuck in the drinker.

Photograph 3. Pronghorn using an in-ground recessed drinker.

An additional storage tank will take pressure off of the underground pipeline to make it more durable. Due to the elevation differences between the well site and drinker locations, storage tanks are an important component of this system. There are currently two storage tanks, and one additional 10,000 gallon storage tank is proposed.

This project is considered to be part of the landscape scale Central Arizona Grasslands Restoration Strategy. A multi-agency team was formed to address the need for grasslands restoration in central Arizona. Juniper treatment projects funded by AGFD were conducted in 2008 and 2009 on the south end of Malapai Mesa. This juniper treatment location is part of an important movement corridor for pronghorn traveling between north and south GMU 21. Many more acres of juniper treatments have been completed the past few years on Sycamore Mesa directly to the south of the project area. Almost all fences in the project area have been built or modified to wildlife friendly standards.

One of the most critical and limiting factors for responsible wildlife and range management has become water. Until the last two decades, more reliable rain was received around the project area. Without extra sources of water on these rangelands, wildlife restoration projects would not be effective in helping to manage wildlife populations. Researching climate trends over the past 120 years indicates that we are approximately halfway through a thirty to forty year drought cycle. Though the rains still come with the seasons, overall rainfall amounts over the past twenty years are only about half of that received during wetter times. Developing water sources such as proposed here uses the latest solar technology to minimize waste while ensuring adequate amounts of water to sustain wildlife.

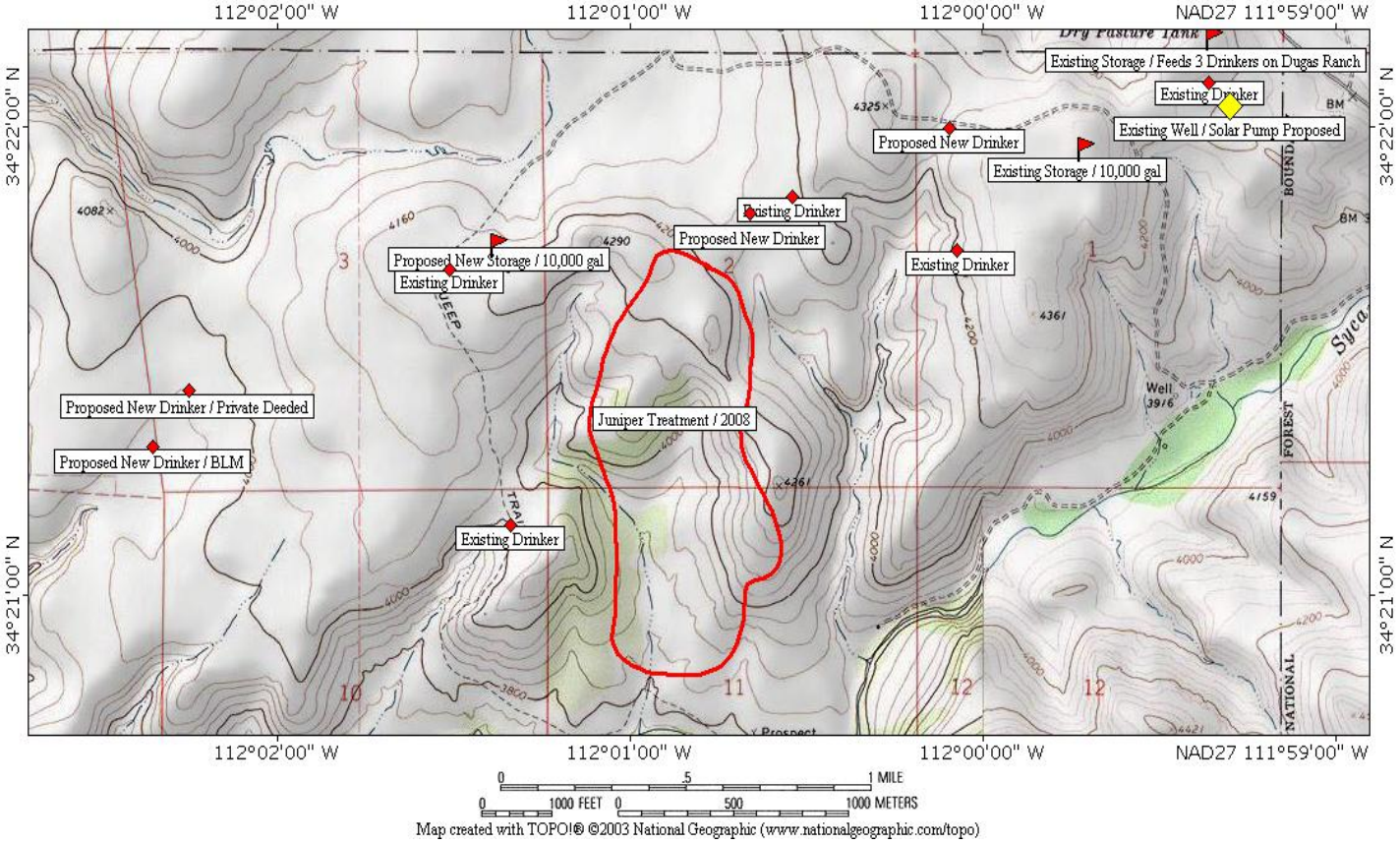
PROJECT OBJECTIVES:

1) Provide year round water for Pronghorn, Mule Deer, and other wildlife on Malapai Mesa in GMU 21.
2) Continue to build a positive relationship with a permittee dedicated to responsible land management practices.

PROJECT STRATEGIES:

Funding will be used by the landowner to purchase an additional 10,000 gallon storage tank, four new drinkers, and pipelines along with other materials and hardware needed to complete the system which will establish water across the mesa at locations suitable to pronghorn use to lower the chances of predation.

PROJECT LOCATION:
The proposed project site is located in Yavapai County on the Agua Fria National Monument (BLM).



2Y Ranch Solar Project Area Map. Location is between Little Ash Creek and Dugas, north of Sycamore Creek in GMU 21.

LAND OWNERSHIP AT PROJECT SITE:

Private Property owned by Mr. Bert Teskey and Mr. Tomas Teskey at the well site and the site of one of the proposed new drinkers. BLM lands make up the majority of the project site.

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
Yes

HABITAT DESCRIPTION:

The 2Y Ranch is located in the northwestern portion of GMU 21 near Dugas. The habitat type is predominantly Semidesert Grassland and is excellent habitat for pronghorn, along with mule deer. The elevations in the project area range from 3900' to 4300' above sea level.

ITEMIZED USE OF FUNDS:

See Budget Analysis

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

Arizona Game and Fish Department:
-Provide field support for coordinating with land management agencies (BLM).
-Provide field support for surveying fences to check for wildlife friendly standards.

2Y Ranch
-Provide planning support.
-Provide labor to construct/install/modify existing and proposed storage tanks and drinkers.
-Provide labor to plumb the system to ensure all drinkers are operational before completion of the project.

Bureau of Land Management (BLM)
-Provide labor for archeological clearances.
-Provide labor for NEPA/EA clearances.

Arizona Antelope Foundation
-Provide a volunteer fence modification project if necessary.

PROJECT MONITORING PLAN:

Use of the drinkers by wildlife will be monitored by the Wildlife Manager in GMU 21 during aerial game surveys, an annual site visit, and hunter feedback. Species using the drinkers for water will be recorded, and an estimate of the use will be made by the Wildlife Manager.

PROJECT MAINTENANCE:

Water system, including the solar pumping system, storage tanks, drinkers, and pipeline, will be maintained by the landowner for a minimum of 5 years.

PROJECT COMPLETION REPORT TO BE FILED BY:

Jake Fousek, WM, GMU 21

Tomas Teskey, 2Y Ranch

WATER DEVELOPMENT PROJECTS (see attached worksheet):

Not Applicable

Budget Analysis

Anticipated Costs: *Project Component and Cooperator*	*Cost-Share Dollars*	*Grant Dollars Requested*
Arizona Game and Fish Department / HPC Funding		
-Provide funding for the materials needed to improve the existing system (Storage tank, drinkers, pipe, etc).		**$19,840**
Arizona Game and Fish Department / Landowner Relations Program and HPC Funding	**$40,000**	
-Provide funding for float valves, steel pipe sections and fittings, couplings and clamps for poly pipe, five air relief valves, brass shutoff valves, and other miscellaneous hardware.		
-Provide funding for Solar Pump and Installation Summer 2009		
Arizona Game and Fish Department / Region VI	**$750**	
-Provide Wildlife Manager support for grant preparation, project planning and execution. Calculated as 5 days @ $150/day.		
2Y Ranch		
-Provide existing well casing, storage tanks, drinkers, pipelines, hardware and infrastructure.	**$65,000**	
-Provide labor and support to coordinate locations of proposed new storage tanks and drinkers with cooperators/contractors. Provide support to facilitate installation of solar pumping system by contractor.	**$1,500**	
-Provide labor to install 10,000 gallon storage tank.	**$1,200**	
-Provide labor to install four drinkers set up with float valves, shutoff valves, fittings, unions, wildlife escape ramps and protection for valve assemblies.	**$3,000**	
-Provide labor to modify the configuration of five existing drinkers (recess, re-plumb, new ramps, etc.)	**$1,500**	
-Provide labor to install approximately 5,400 feet of pipeline.	**$4,200**	
-Provide heavy equipment and fuel for site preparation.	**$3,300**	
Bureau of Land Management (BLM)		
-Provide labor to complete Archeological Clearances for the proposed new drinkers and storage tank on BLM land. Calculated as 5 days @ $150/day	**$750**	
-Provide labor to complete NEPA/EA. Calculated as 10 days @ $150/day	**$1,500**	
Totals:	**$122,700**	**$19,840**